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No. of Printed Pages: 2

[A-29]

{ } SARDAR PATEL UNIVERSITY
M.Sc. (Integrated) Biotechnology (IGMBT), 10th Semester Examination
Saturday, 25th April 2015
10:30 A.M to 1:30 P.M
PS10CIGMB3: Drug design and development

Total Marks: 70

Note: (1) Figures to the right indicate marks.
(2) Draw a neat and labeled diagram, wherever necessary.

Q. 1 Choose the most appropriate answer from the four alternatives given:

[8]

- (1) Which of the following has same effect as an antagonist in that it binds to a receptor, fails to activate it and prevent normal messenger from binding
(a) Inverse agonists (b) partial antagonist (c) antagonist (d) agonist
- (2) Which of the following drug is used for the treatment of rheumatoid arthritis?
(a) rofecoxib (b) vaidecocib (c) celecoxib (d) all of them
- (3) Pharmacophore is common description of ----- of few inhibitors,
(a) structure (b) property (c) angle (d) structure property and angle
- (4) QSTR Stands for
(a) Quantitative structure tolerance relationship
(b) Qualitative structure toxicity relationship
(c) Quantitative structure toxicity relationship
(d) Qualitative structure tolerance relationship
- (5) Homology modeling can be done on
(a) Protein (b) Nucleic acid (c) Carbohydrate (d) All of the above
- (6) eDetailing is often used as a blanket term for various
(a) online physician marketing (b) offline online physician marketing
(c) both off and online physician marketing (d) none of the above
- (7) Carbidopa is a example of
(a) prodrug (b) Sentry drug (c) none of them (d) all of them
- (8) Palmitate ester of chloramphenicol is used to : (a) increase polarity (b) decrease polarity (c) target drug (d) none of them

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Q-2 Answer any SEVEN from the following:

[14]

- (1) Name the aminoacids which are present on the active site of enzymes and highly involved in the reactions.
- (2) How antifreeze poisoning occurs?
- (3) Differentiate between Transition state analogues and suicide substrate.
- (4) What is Post market surveillance?
- (5) Write brief account on Adverse drug reaction
- (6) Define Drug drug interaction.
- (7) Explain Brand recall in brief.
- (8) Write brief account on steric shields.
- (9) Define sentry drug.

- Q.3 (a)** What is an ideal drug target? Describe six properties of an ideal drug target [6]
(b) What are the key factors contributing to successful drug target identification strategizes. [6]

OR

- (b)** Describe how omics technology helps in target identification. [6]

- Q.4 (a)** Describe the role of isoenzyme as a drug with suitable example. [6]
(b) Discuss criteria for designing agonist in brief. [6]

OR

- (b)** Write detail account on antagonists. [6]

- Q.5 (a)** How prodrugs are used to mask toxicity and side effects? Discuss with suitable examples [6]
(b) How drugs can be made to increase solubility and membrane permeability. [6]

OR

- (b)** Discuss any three methods used to increase stability of the drug. [6]

- Q.6 (a)** What is CTD? Describe various components of CTD with diagram? [6]
(b) Differentiate between IND and NDE filing [6]

OR

- (b)** Describe four phases of Clinical Trial [6]